Ship Roll Mitigation System (SMRS)

OBJECTIVE:

Investigate the Ship Roll Stimulator concept to determine if it can be extended to mitigate ship roll through repeated system operation in opposition to wave caused ship motion

APPROACH

Year 1: Perform feasibility studies to determine options; Perform 1/8 scale tests with previously developed flume system and 40 foot utility boat; Develop system control algorithms for the full scale ship stimulator and determine system design changes

Year 2: Implement design options and design full scale tests

Year 3: Perform feasibility demonstration; Complete documentation

FY01 NEW START PROGRAM

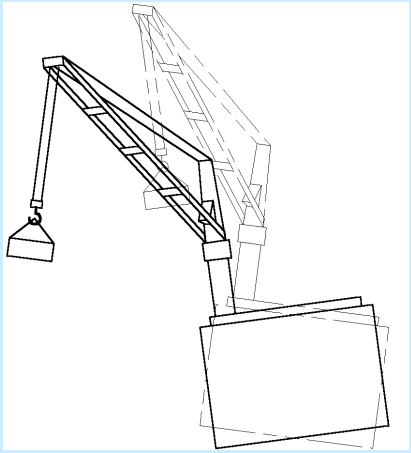
Uses technology developed under the Ship Roll Stimulator portion of the current Sea State 3 Crane ATD

PAYOFF

Reduced ship motion due to swells while at anchor during JLOTS cargo operations

Potential application to ships underway

Ship Roll Mitigation Concept



Without mitigation

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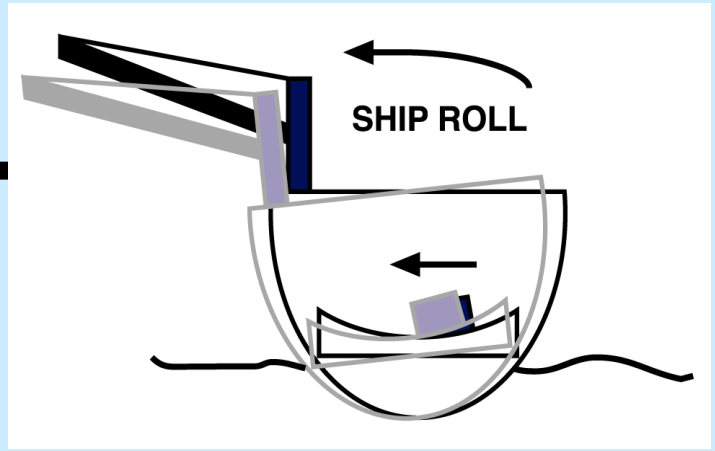

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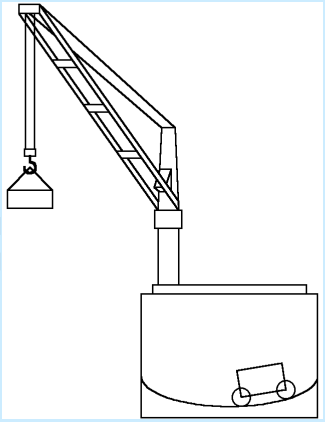

With mitigation